

CLAIMS:

1. Method of decoding MPEG coded digital picture data, the method comprising
:
receiving MPEG compressed digital picture data in a forward reproduction
order;

5 storing the compressed picture data in at least one GOP (Group Of Picture)
according to the MPEG standard,

said compressed picture data including I-picture data, P-picture data and B-
picture data;

10 retrieving the compressed picture data to produce decoded pictures by picture
predictions according to a decoding method of the MPEG standard;

wherein if a reverse playback order reproduction is ordered;
repeatedly retrieving compressed picture data in a forward reproduction order
for repeatedly decoding said retrieved picture data;

15 displaying the decoded picture data in an order reverse to the forward
reproduction order, characterized by,

temporarily storing the decoded picture data in order to reduce the times of
repeatedly retrieving and decoding compressed picture data in a forward reproduction order;
and decoding retrieved picture data employing said temporarily stored
decoded picture data for display in an order reverse to the forward reproduction order.

20 2. Method according to claim 1, characterised by,
storing in addition compressed picture data of a previous GOP;
retrieving compressed picture data from the previous GOP in an forward
reproduction order;

25 producing decoded pictures of the previous GOP by picture predictions
according to a decoding method of the MPEG standard;

temporarily storing the produced decoded pictures of the previous GOP in
order to limit retrieval of compressed picture data of the previous GOP to once-only.

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3. Method according to claim 2, wherein said digital picture data comprise a GOP according to the NTSC or PAL format, characterised by, temporarily storing simultaneously a maximum of four decoded pictures.

5 4. Method accordig to claim 3, characterised by, repeatedly storing successively several decoded picture data of a GOP_a.

10 5. Decoding arrangement for decoding MPEG coded digital picture data comprising :

receiving means for receiving MPEG compressed digital picture data in a forward reproduction order;

storing means for storing the compressed picture data in at least one GOP (Group Of Picture) according to the MPEG standard,

15 said compressed picture data including I-picture data, P-picture data and B-picture data;

retrieving means for retrieving the compressed picture data from said storage means;

20 decoding means for decoding pictures by picture predictions according to a decoding method of the MPEG standard;

decoding control means to control the retrieving means and decoding means;

display output means for displaying the decoded picture data,

25 wherein if a reverse playback order reproduction operational mode is present, the decoding control means are being adapted to enable repeatedly retrieval of compressed picture data from the storing means in a forward reproduction order for repeatedly decoding said retrieved picture data;

characterized in that, the decoding arrangement further comprises

30 memory buffer means for temporarily storing the decoded picture data in order to reduce the times of repeatedly retrieving and decoding compressed picture data in a forward reproduction order and

the decoding control means are adapted to control the decoding means to decode retrieved coded picture data employing said temporarily stored decoded picture data for display in an order reverse to the forward reproduction order.

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6. Decoding arrangement according to claim 5, characterised in that,
the storing means are adapted to additionally store compressed picture data of
a previous GOP;

5 the decoding control means are adapted to control retrieval of compressed
picture data from the previous GOP in an forward reproduction order and to control
producing of decoded pictures of the previous GOP by picture predictions according to a
decoding method of the MPEG standard;

10 the decoding control means are further adapted to control the memory buffer
means to temporarily store the produced decoded pictures of the previous GOP for limiting
retrieving of compressed picture data of the previous GOP to once-only.

7. Decoding arrangement according to claim 6, adapted to receive digital picture
data comprise a GOP according to the NTSC or PAL format,

15 characterised in that ,
the memory buffer means are adapted to temporarily store a maximum of four
decoded pictures simultaneously.

8. Decoding arrangement according to claim 7, characterised in that,
the memory buffer means are adapted to repeatedly storing successively
20 several decoded picture data of a GOP.

9. Reproducing arrangement for reproducing MPEG coded digital picture data
stored on an recording medium, comprising

25 signal detecting means for detecting signals representing the information
stored on the recording medium;

demodulating means for deriving bit signals from the detected signals;

channel demodulating means for obtaining the MPEG coded digital picture
data; characterised in that,

30 the reproducing means comprises decoding means according to one of the
claims ~~5-8~~.

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